GENERALIZED INTEGRAL OPERATORS RELATED WITH \( p \)-VALENT ANALYTIC FUNCTIONS

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Abstract. Let \( \mathcal{A}(p), p \in \mathbb{N} \), be the class of functions \( f : f(z) = z^p + \sum_{k=1}^{\infty} a_{p+k} z^{p+k} \), analytic in the unit disc \( E \). For \( n \in \mathbb{N}_0, n > -p \), an integral operator \( I_{n+p-1} : \mathcal{A}(p) \rightarrow \mathcal{A}(p) \) is defined as \( I_{n+p-1} f = J_{n+p-1}^{(-1)} \star f \) such that \( \left( J_{n+p-1}^{(-1)} \star f_{n+p-1} \right)(z) = \frac{z^p}{(1-z^p)^{n+p-1}} \) and \( \star \) denotes convolution. Using this integral operator, some new classes \( H_{n,p}(k, \alpha, \beta, \mu, \lambda) \) of \( \mathcal{A}(p) \) are introduced and certain interesting properties of these classes are studied. A radius problem is also discussed.

Keywords and phrases: \( p \)-valent functions, convolution, integral operator, radius problems.

REFERENCES